Standard Operating Procedures for Latent Print Processing with Forensic Light Sources

1 Scope

Forensic Light Sources are used by latent print personnel to examine any type of evidence for the presence of latent prints. Forensic Light Sources are used before any processing is conducted in order to visualize any inherent fluorescence and are also used in conjunction with certain processes that may result in fluorescence or improved contrast.

2 Equipment/Materials/Reagents

LASER (532nm)

Blue Forensic Light Source (450nm)

Long-wave ultraviolet (UV) Forensic Light Source (365nm)

Short-wave ultraviolet Forensic Light Source (254nm)

Reflective Ultraviolet Imaging System (RUVIS)

CrimeScope® (Ultraviolet 300-400nm, 415nm, 445nm, 455nm, 475nm, 495nm, CrimeSceneScope [Crime Scene Search short pass filter SP530nm], 515nm, 535nm, 555nm, SP575nm, 600nm, 630nm, 670nm, white light and infrared output)

Other Forensic Light Sources

Barrier filter or eye-wear with appropriate barrier filter

3 Standards and Controls

Not applicable.

4 Sampling or Sample Selection

Not applicable.

5 Procedures

a) Use appropriate barrier filter (e.g., protective eye wear) and ensure it matches or exceeds

Forensic Light Source's wavelength.

b) Turn on the Forensic Light Source.

c) Adjust or select the appropriate Forensic Light Source intensity and/or wavelength as necessary and available.

d) View evidence using the Forensic Light Source.

e) Turn off the Forensic Light Source.

f) Remove protective barrier filter (e.g., protective eye wear).

g) For digital capture and photography, see FBI Latent Print Units Processing Manual Preamble.

6 Calculations

Not applicable.

7 Measurement Uncertainty

Not applicable.

8 Limitations

Fluorescent compounds will suffer from loss of fluorescent intensity over time; as such, fluorescent prints will be captured as soon as is practicable.

Short-wave UV light (254nm) is detrimental to DNA examinations.

9 Safety

See FBI Laboratory Safety Manual for appropriate information.

10 References

FBI Laboratory Safety Manual, Federal Bureau of Investigation, Laboratory Division. Latest Revision.

FBI Latent Print Units Processing Manual, Preamble, Federal Bureau of Investigation, Laboratory Division. Latest Revision.

Lee, H.C. and Gaensslen, R. E. (1994). Advances in Fingerprint Technology. Boca Rotan:CRC Press.

LIA Laser Safety Committee, Edited by David H. Sliney. (1993). Laser Safety Guide, 9th ed. Orlando:Laser Institute of America.

Margot, P. and Lennard, C. (1994). Fingerprint Detection Techniques, 6th ed., Switzerland, Institut de Police Scientifique et de Criminologie.

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Rev. #	Issue Date	History
0	01/13/14	Original document issued. Derived from Discontinued Latent Print Operations Manual, Standard Operating Procedures for Processes Used to Develop Latent Prints. The original LPU Processing Manual consisted of a single document with a preamble and procedures for all processes. The current document separates each into its own separate document. This document combines Procedures for Crimescope™, Coherent Verdi V-10 Laser, Polilight™ CSD-PL6, Scenescope™, and Ultraviolet Light.
1	10/02/17	Specific section numbers referenced in Preamble removed throughout document. Section 1, latent print personnel added. Section 4 removed and remaining renumbered. Titles for Section 4 and Section 7 modified. Section 9, generalized. Updated for Biometrics Analysis Unit. References updated.

Approval

Redacted - Signatures on File